### MAIN WORKSHEET-BUILD ALTERNATIVE

City and County of Honolulu

Honolulu Rail Transit Project, East Kapolei to Ala Moana Center via Airport

Application for P.E.

(Rev.11, May 2, 2008)

Today's Date 05/01/09

Yr of Base Year \$ FY 2009
Yr of Revenue Ops FY 2019

									11 01 10		
		Quantity		Base Year	Base Year	Base Year	Base '	Year	Base Year	Base Year	YOE Dollars
				Dollars w/o	Dollars	Dollars	Dollars	s Unit	Dollars	Dollars	Total
				Contingency	Allocated	TOTAL	Cos		Percentage of	Percentage of	(X000)
				(X000)	Contingency	(X000)	(X00	00)	Construction	Total	
					(X000)		,		Cost	Project Cost	
40 CUID	EWAY & TRACK ELEMENTS (route miles)	20.48		1,124,983	281,246	1,406,228	\$ 6	8,651	49%	32%	1,647,608
		20.40		1,124,303	201,240		Ψ	0,001	43 /0	JZ /0	
	Guideway: At-grade exclusive right-of-way					0	-				0
10.02	2 Guideway: At-grade semi-exclusive (allows cross-traffic)					0					0
10.03	3 Guideway: At-grade in mixed traffic					0					0
10.04	4 Guideway: Aerial structure	20.14		986,399	246,600	1,232,999	\$ 6	31,221			1,444,644
	5 Guideway: Built-up fill					0					0
						0		-			0
	6 Guideway: Underground cut & cover					15/1	-				
	7 Guideway: Underground tunnel					0					0
10.08	3 Guideway: Retained cut or fill	0.34		5,530	1,382	6,912	\$ 2	20,108			8,099
10.09	7 Track: Direct fixation			123,389	30,847	154,236					180,711
10.10	) Track: Embedded					0	1				0
	1 Track: Ballasted					0	1				0
				0.005	0.440	100	1				
	2 Track: Special (switches, turnouts)			9,665	2,416	12,081	4				14,155
10.13	3 Track: Vibration and noise dampening					0					0
20 STAT	IONS, STOPS, TERMINALS, INTERMODAL (number)	21		244,623	61,156	305,779	\$ 14	4,561	11%	7%	383,595
20.01	At-grade station, stop, shelter, mall, terminal, platform					0					0
		21		186,359	46,590	232,949	\$ 1	1,093			292,231
	2 Aerial station, stop, shelter, mall, terminal, platform			100,009	40,000		Ψ	1,033			
	3 Underground station, stop, shelter, mall, terminal, platform					0					0
	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.					0					0
20.05	5 Joint development		1			0					0
20.08	Automobile parking multi-story structure					0					0
	7 Elevators, escalators			58,264	14,566	72,830	1				91,364
				97,327	24,332	121,659	\$	5,939	4%	3%	137,304
	PORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS						2	5,939	4%	3%	
	Administration Building: Office, sales, storage, revenue counting			16,673	4,168	20,841					23,521
30.02	2 Light Maintenance Facility					0					0
	B Heavy Maintenance Facility			80,654	20,164	100,818					113,783
	Storage or Maintenance of Way Building					0	1				0
						0	1				
	5 Yard and Yard Track									4=04	0
	NORK & SPECIAL CONDITIONS			575,897	181,727	757,624	\$ 30	6,987	27%	17%	885,186
40.01	1 Demolition, Clearing, Earthwork			25,642	8,975	34,617					40,446
40.02	2 Site Utilities, Utility Relocation			331,900	116,165	448,066	1				523,507
	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments			10,144	3,550	13,694	1				16,000
	Environmental mitigation, e.g. wetlands, historic/archeologic, parks			9,840	3,444	13,284	1				15,521
	5 Site structures including retaining walls, sound walls			3,040	0,444	0	1				0
	5 One structures medium retaining wans, sound wans 5 Pedestrian / bike access and accommodation, landscaping					0	1				0
				198,371	49,593	247,964	1				289,713
	7 Automobile, bus, van accessways including roads, parking lots 3 Temporary Facilities and other indirect costs during construction			190,571	49,090	0	1				0
50 SYS				203,429	50,857	254,286	\$ 13	2,414	9%	6%	311,031
							Ψ 1.	2,414	3 /6	0 /0	
	1 Train control and signals			34,627	8,657	43,283	1				52,942
50.02	2 Traffic signals and crossing protection			24,237	6,059	30,296					37,057
50.03	3 Traction power supply: substations			42,010	10,503	52,513					64,231
50.04	Traction power distribution: catenary and third rail			68,511	17,128	85,639	1				104,749
	5 Communications			20,821	5,205	26,026	1				31,834
				4,364	1,091	5,454	1				6,672
	Fare collection system and equipment						-				100000000000000000000000000000000000000
	7 Central Control			8,860	2,215	11,075					13,546
Constru	ction Subtotal (10-50)			2,246,259	599,318	2,845,577	\$ 13	8,919	100%	64%	3,364,725
60 ROW	, LAND, EXISTING IMPROVEMENTS			85,283	42,642	127,925	\$	6,245		3%	117,630
	1 Purchase or lease of real estate			83,015	41,508	124,523					114,502
	2 Relocation of existing households and businesses			2,268	1,134	3,402	1		,		3,128
	CLES (number)	^7				3,402					
		h/		243 865			\$	4.513		7%	
	Light Pail	67		243,865	58,528	302,393	\$ 4	4,513		7%	345,624
70.01	Light Rail				58,528	<b>302,393</b> 0				7%	<b>345,624</b> 0
70.01 70.02	2 Heavy Rail	67		243,865 217,139		302,393 0 269,253		<b>4,513</b> 4,019		7%	345,624 0 307,746
70.01 70.02 70.03	2 Heavy Rail 3 Commuter Rail				58,528	<b>302,393</b> 0				7%	<b>345,624</b> 0
70.01 70.02 70.03	2 Heavy Rail				58,528	302,393 0 269,253				7%	345,624 0 307,746
70.01 70.02 70.03 70.04	2 Heavy Rail 3 Commuter Rail 4 Bus				58,528	302,393 0 269,253 0				7%	345,624 0 307,746 0 0
70.01 70.02 70.03 70.04 70.05	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other			217,139	58,528 52,114	302,393 0 269,253 0 0				7%	345,624 0 307,746 0 0
70.01 70.03 70.03 70.04 70.05 70.06	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 6 Non-revenue vehicles			217,139	58,528 52,114 1,203	302,393 0 269,253 0 0 0 0 6,215				7%	345,624 0 307,746 0 0 0 7,103
70.01 70.02 70.03 70.04 70.05 70.06 70.06	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts			217,139 217,139 5,012 21,714	58,528 52,114 1,203 5,211	302,393 0 269,253 0 0 0 6,215 26,925	\$	4,019			345,624 0 307,746 0 0 0 7,103 30,775
70.01 70.02 70.03 70.04 70.05 70.06 70.06	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 6 Non-revenue vehicles			217,139	58,528 52,114 1,203 5,211 157,755	302,393 0 269,253 0 0 0 6,215 26,925 749,027	\$		26%	7% 17%	345,624 0 307,746 0 0 0 7,103 30,775 829,833
70.01 70.02 70.03 70.04 70.05 70.06 70.07	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts			217,139 217,139 5,012 21,714	58,528 52,114 1,203 5,211	302,393 0 269,253 0 0 0 6,215 26,925	\$	4,019	26%		345,624 0 307,746 0 0 0 7,103 30,775
70.01 70.02 70.03 70.04 70.05 70.06 70.07 <b>80 PROF</b> 80.01	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 6 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering			5,012 217,14 591,271 17,710	58,528 52,114 1,203 5,211 157,755 4,725	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435	\$	4,019	26%		345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855
70.01 70.02 70.03 70.04 70.05 70.06 70.07 <b>80 PROF</b> 80.01 80.02	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 6 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design			5,012 21,714 591,271 17,710 99,270	58,528 52,114 1,203 5,211 157,755 4,725 26,486	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756	\$	4,019	26%		345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323
70.01 70.02 70.03 70.04 70.05 70.06 70.07 <b>80 PROF</b> 80.01 80.02 80.03	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts  FESSIONAL SERVICES (applies to Cats. 10-50)  1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction			217,139 5,012 21,714 591,271 17,710 99,270 99,270	58,528 52,114 1,203 5,211 157,755 4,725 26,486 26,486	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756	\$	4,019	26%		345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323
70.01 70.02 70.03 70.04 70.05 70.07 70.07 80.01 80.01 80.02 80.03	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 8 Project Management for Design and Construction 4 Construction Administration & Management			5,012 217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601	58,528 52,114 1,203 5,211 157,755 4,725 26,486 26,486 58,858	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 279,459	\$	4,019	26%		345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 309,607
70.01 70.02 70.03 70.04 70.05 70.07 80 PROF 80.01 80.02 80.03 80.04 80.05	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 6 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 8 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance			5,012 217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090	1,203 5,211 157,755 4,725 26,486 26,486 58,858 8,829	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 279,459 41,919	\$	4,019	26%		345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 309,607 46,441
70.01 70.02 70.03 70.04 70.05 70.07 80 PROF 80.01 80.02 80.03 80.04 80.05	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 8 Project Management for Design and Construction 4 Construction Administration & Management			5,012 217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601	58,528 52,114 1,203 5,211 157,755 4,725 26,486 26,486 58,858	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 279,459	\$	4,019	26%		345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 309,607
70.01 70.02 70.03 70.04 70.05 70.07 80 PROF 80.01 80.02 80.03 80.04 80.05	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 6 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 8 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits; Review Fees by other agencies, cities, etc.			5,012 217,143 591,271 17,710 99,270 99,270 220,601 33,090 33,090	1,203 5,211 157,755 4,725 26,486 26,486 58,858 8,829 8,829	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 125,756 279,459 41,919 41,919	\$	4,019	26%		345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 139,323 46,441 46,441
70.01 70.02 70.03 70.04 70.05 70.06 70.07 80.01 80.02 80.03 80.04 80.06 80.06 80.06	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 5 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection			5,012 217,143 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030	1,203 5,211 157,755 4,725 26,486 26,486 58,858 8,829 8,829 2,943	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 279,459 41,919 41,919 13,973	\$	4,019	26%		345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 309,607 46,441 46,441 15,480
70.01 70.02 70.03 70.04 70.05 70.06 70.06 80.01 80.02 80.03 80.04 80.06 80.06 80.07 80.00	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 279,459 41,919 41,919 13,973 97,810	\$ 30	4,019 <b>6,567</b>	26%	17%	345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 309,607 46,441 46,441 15,480 108,362
70.01 70.02 70.03 70.04 70.06 70.07 70.07 80 PROF 80.02 80.03 80.04 80.05 80.06 80.06 80.07 80.08	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 9 Preliminary Engineering 2 Final Design 8 Project Management for Design and Construction 9 Construction Administration & Management 9 Professional Liability and other Non-Construction Insurance 1 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up			5,012 217,143 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030	1,203 5,211 157,755 4,725 26,486 26,486 58,858 8,829 8,829 2,943	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 279,459 41,919 41,919 13,973 97,810 4,024,922	\$	4,019 <b>6,567</b>	26%	17%	345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 39,607 46,441 46,441 15,480 108,362 4,657,812
70.01 70.02 70.03 70.04 70.05 70.06 70.07 80.01 80.02 80.03 80.04 80.06 80.07 80.08 Subtotal	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 8 Start up 1 (10 - 80) LLOCATED CONTINGENCY			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 125,756 127,459 41,919 41,919 13,973 97,810 4,024,922 242,717	\$ 30	4,019 6,567	26%	17% 90% 5%	345,624 0 307,746 0 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 139,323 139,323 146,441 46,441 15,480 108,362 4,657,812 284,398
70.01 70.02 70.03 70.04 70.05 70.06 70.07 80.01 80.02 80.03 80.04 80.06 80.07 80.08 Subtotal	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 9 Preliminary Engineering 2 Final Design 8 Project Management for Design and Construction 9 Construction Administration & Management 9 Professional Liability and other Non-Construction Insurance 1 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 279,459 41,919 41,919 13,973 97,810 4,024,922	\$ 30	4,019 <b>6,567</b>	26%	17%	345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 39,607 46,441 46,441 15,480 108,362 4,657,812
70.01 70.02 70.03 70.04 70.05 70.06 70.07 80.07 80.02 80.03 80.06 80.06 80.06 80.08 Subtotal	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 5 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up 1 (10 - 80) 1 LOCATED CONTINGENCY			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 125,756 279,459 41,919 41,919 41,919 41,919 41,919 41,922 242,717 4,267,639	\$ 30	4,019 6,567	26%	90% 5% 96%	345,624 0 307,746 0 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 309,607 46,441 46,441 15,480 108,362 4,657,812 284,398 4,942,210
70.01 70.02 70.03 70.06 70.06 70.06 70.07 80 PROF 80.02 80.03 80.04 80.05 80.05 80.05 80.08 80.07 80.08 Subtotal 90 UNAL Subtoting Fin	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 8 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up 1 (10 - 80) LLOCATED CONTINGENCY 1 (10 - 90) ANCE CHARGES			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 279,459 41,919 41,919 13,973 97,810 4,024,922 242,717 4,267,639 194,327	\$ 30 \$ 200	6,567 6,493 8,343	26%	90% 5% 96% 4%	345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 39,607 46,441 46,441 15,480 108,362 4,657,812 284,398 4,942,210 230,873
70.01 70.02 70.03 70.04 70.05 70.06 70.07 80.07 80.02 80.03 80.06 80.07 80.08 Subtotal 100 FIN. Total Pro	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits, Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up 1 (10 - 80) LOCATED CONTINGENCY 1 (10 - 90) ANCE CHARGES oject Cost (10 - 100)			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 279,459 41,919	\$ 30 \$ 200	4,019 6,567	26%	90% 5% 96%	345,624 0 307,746 0 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 309,607 46,441 46,441 15,480 108,362 4,657,812 284,398 4,942,210
70.01 70.02 70.03 70.04 70.06 70.06 70.06 80.01 80.02 80.03 80.06 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FIN, Total Pri Allocated	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up 1 (10 - 80) LIOCATED CONTINGENCY 1 (10 - 90) ANCE CHARGES 0 ject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 125,756 125,756 127,459 41,919 41,919 41,919 41,919 424,717 4,267,639 194,327 4,461,965 27,10%	\$ 30 \$ 200	6,567 6,493 8,343	26%	90% 5% 96% 4%	345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 39,607 46,441 46,441 15,480 108,362 4,657,812 284,398 4,942,210 230,873
70.01 70.02 70.03 70.02 70.06 70.06 70.07 80 PROF 80.02 80.03 80.02 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FIN Total Pri Allocated Unallocated	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 8 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up 1 (10 - 80) LLOCATED CONTINGENCY L(10 - 90) ANCE CHARGES oject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 125,756 279,459 41,919 41,919 41,919 41,919 41,919 424,922 242,717 4,267,639 194,327 4,461,965 27,10% 7,66%	\$ 30 \$ 200	6,567 6,493 8,343	26%	90% 5% 96% 4%	345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 39,607 46,441 46,441 15,480 108,362 4,657,812 284,398 4,942,210 230,873
70.01 70.02 70.03 70.04 70.05 70.06 70.07 80 PROF 80.02 80.03 80.04 80.05 80.05 80.06 80.07 80.08 Subtotal 100 FIN Total Pro Allocated Unallocated Unallocated Total Cont	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts EESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up 1 (10 - 30) LOCATED CONTINGENCY 1 (10 - 90) ANCE CHARGES oject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency tingency as % of Base Yr Dollars w/o Contingency			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 279,459 41,919 13,973 97,810 4,024,922 242,717 4,267,639 194,327 4,461,965 27,10% 7,96% 34,77%	\$ 30 \$ 200	6,567 6,493 8,343	26%	90% 5% 96% 4%	345,624 0 307,746 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 39,607 46,441 46,441 15,480 108,362 4,657,812 284,398 4,942,210 230,873
70.01 70.02 70.03 70.04 70.06 70.06 70.06 80.01 80.02 80.03 80.06 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FIN, Total Pri Allocated Unallocat Total Con Unallocat	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up 1 (10 - 80) LOCATED CONTINGENCY 1 (10 - 90) ANCE CHARGES oject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency tingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Subtotal (10 - 80)			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 125,756 279,459 41,919 41,919 41,919 41,919 41,919 424,922 242,717 4,267,639 194,327 4,461,965 27,10% 7,66%	\$ 30 \$ 200	6,567 6,493 8,343	26%	90% 5% 96% 4%	345,624 0 307,746 0 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 139,323 139,323 146,441 46,441 15,480 108,362 4,657,812 284,398 4,942,210 230,873 5,173,083
70.01 70.02 70.03 70.00 70.05 70.06 70.07 80 PROF 80.01 80.02 80.03 80.06 80.07 80.08 Subtotal 100 FIN Total Pra Allocated Unallocat Total Con Unallocat YOE Con	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) I Preliminary Engineering 2 Final Design 8 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 5 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up I (10 - 80) LLOCATED CONTINGENCY I (10 - 90) ANCE CHARGES oject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency tingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Subtotal (10 - 80) struction Cost per Mile (X000)			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 279,459 41,919 13,973 97,810 4,024,922 242,717 4,267,639 194,327 4,461,965 27,10% 7,96% 34,77%	\$ 30 \$ 200	6,567 6,493 8,343	26%	90% 5% 96% 4%	345,624 0 307,746 0 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 139,323 139,323 146,441 46,441 15,480 108,362 4,657,812 284,398 4,942,210 230,873 5,173,083
70.01 70.02 70.03 70.02 70.05 70.06 70.06 70.07 80 PROF 80.02 80.03 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FIN. Total Pr. Allocated Unallocate Total Con Unallocat Total Con YOE Cont YOE Con	2 Heavy Rail 3 Commuter Rail 4 Bus 5 Other 5 Non-revenue vehicles 7 Spare parts FESSIONAL SERVICES (applies to Cats. 10-50) 1 Preliminary Engineering 2 Final Design 3 Project Management for Design and Construction 4 Construction Administration & Management 5 Professional Liability and other Non-Construction Insurance 6 Legal; Permits; Review Fees by other agencies, cities, etc. 7 Surveys, Testing, Investigation, Inspection 3 Start up 1 (10 - 80) LOCATED CONTINGENCY 1 (10 - 90) ANCE CHARGES oject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Base Yr Dollars w/o Contingency tingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Subtotal (10 - 80)			217,139 5,012 21,714 591,271 17,710 99,270 99,270 220,601 33,090 33,090 11,030 77,210	58,528 52,114 1,203 5,211 157,755 4,725 26,486 58,858 8,829 8,829 2,943 20,600	302,393 0 269,253 0 0 0 6,215 26,925 749,027 22,435 125,756 125,756 279,459 41,919 13,973 97,810 4,024,922 242,717 4,267,639 194,327 4,461,965 27,10% 7,96% 34,77%	\$ 30 \$ 200	6,567 6,493 8,343	26%	90% 5% 96% 4%	345,624 0 307,746 0 0 0 0 7,103 30,775 829,833 24,855 139,323 139,323 139,323 139,323 146,441 46,441 15,480 108,362 4,657,812 284,398 4,942,210 230,873 5,173,083

# INFLATION WORKSHEET

City and County of Honolulu

Honolulu Rail Transit Project, East Kapolei to Ala Moana Center via Airport

Application for P.E.

Insert comments, notes, etc.

BASE YEAR DOLLARS (X\$000)	Base Yr Dollars	Double- Check Total	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
10 GUIDEWAY & TRACK ELEMENTS	1,406,228	1,406,228	25,528	139,068	208,999	385,158	317,078	218,675	102,482	9,240		0
20 STATIONS, STOPS, TERMINALS, INTERMODAL	305,779	305,779	0	1,430	27,254	48,482	34,110	38,992	63,032	57,124	35,354	0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	121,659	121,659	6,407	29,604	29,685	29,604	26,359	0	0	0	0	0
40 SITEWORK & SPECIAL CONDITIONS	757,624	757,624	9,706		190,665	286,098	132,734	39,920	29,395	11,267		0
50 SYSTEMS	254,286		0	28,664	29,387	29,307	29,307	29,387	29,307	29,307	29,307	20,314
60 ROW, LAND, EXISTING IMPROVEMENTS	127,925	127,925	50,160	44,346	33,419	0	0	0	0	0	0	0
70 VEHICLES	302,393	302,393	0	13,148	4,383	26,295	131,475	127,093	0	0	0	0
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	749,027	749,027	76,718	121,623	93,704	100,795	85,266	68,655	61,425	54,504		33,758
90 UNALLOCATED CONTINGENCY	242,717	242,717	11,109	26,290	37,107	53,587	44,782	30,972	17,306	9,964	7,501	4,099
100 FINANCE CHARGES	194,327	194,327			557	5,123	17,439	30,907	35,520	36,913	36,912	30,956
Total Project Cost (10 - 100)	4,461,965	4,461,965	179,628	459,325	655,160	964,448	818,551	584,601	338,468	208,319	164,338	89,127
Total Floject Oost (10 - 100)	7,701,000	4,401,505	175,020	400,020	000,100	304,440	010,001	004,001	000,400	200,010	10-1,000	
		4,401,000										
YEAR OF EXPENDITURE DOLLARS (X\$000)	YOE Dollars		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
YEAR OF EXPENDITURE DOLLARS (X\$000) 10 GUIDEWAY & TRACK ELEMENTS	YOE Dollars 1,647,608			2011 145,151	2012 229,873	2013 445,779	2014 381,628	2015 273,695	2016 133,386	2017 12,506	2018	,
YEAR OF EXPENDITURE DOLLARS (X\$000)  10 GUIDEWAY & TRACK ELEMENTS  20 STATIONS, STOPS, TERMINALS, INTERMODAL	YOE Dollars 1,647,608 383,595		2010 25,589 0	2011 145,151 1,507	2012 229,873 29,977	2013 445,779 55,903	2014 381,628 40,820	2015 273,695 48,430	2016	2017	2018	,
YEAR OF EXPENDITURE DOLLARS (X\$000)  10 GUIDEWAY & TRACK ELEMENTS  20 STATIONS, STOPS, TERMINALS, INTERMODAL  30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	YOE Dollars 1,647,608 383,595 137,304		2010 25,589 0 6,557	2011 145,151 1,507 31,397	2012 229,873 29,977 32,952	2013 445,779 55,903 34,491	2014 381,628 40,820 31,907	2015 273,695 48,430 0	2016 133,386 81,253 0	2017 12,506 76,427 0	2018 0 49,279	,
YEAR OF EXPENDITURE DOLLARS (X\$000)  10 GUIDEWAY & TRACK ELEMENTS  20 STATIONS, STOPS, TERMINALS, INTERMODAL  30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS  40 SITEWORK & SPECIAL CONDITIONS	YOE Dollars 1,647,608 383,595 137,304 885,186		2010 25,589 0	2011 145,151 1,507 31,397 58,569	2012 229,873 29,977 32,952 212,554	2013 445,779 55,903 34,491 334,679	2014 381,628 40,820 31,907 161,314	2015 273,695 48,430 0 50,403	2016 133,386 81,253 0 38,558	2017 12,506 76,427 0 15,355	2018 0 49,279 0 3,817	2019 0 0 0
YEAR OF EXPENDITURE DOLLARS (X\$000)  10 GUIDEWAY & TRACK ELEMENTS  20 STATIONS, STOPS, TERMINALS, INTERMODAL  30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS  40 SITEWORK & SPECIAL CONDITIONS  50 SYSTEMS	YOE Dollars 1,647,608 383,595 137,304 885,186 311,031		2010 25,589 0 6,557 9,938	2011 145,151 1,507 31,397 58,569 30,092	2012 229,873 29,977 32,952 212,554 32,032	2013 445,779 55,903 34,491	2014 381,628 40,820 31,907	2015 273,695 48,430 0	2016 133,386 81,253 0	2017 12,506 76,427 0	2018 0 49,279 0 3,817	,
YEAR OF EXPENDITURE DOLLARS (X\$000)  10 GUIDEWAY & TRACK ELEMENTS  20 STATIONS, STOPS, TERMINALS, INTERMODAL  30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS  40 SITEWORK & SPECIAL CONDITIONS  50 SYSTEMS  60 ROW, LAND, EXISTING IMPROVEMENTS	YOE Dollars 1,647,608 383,595 137,304 885,186 311,031 117,630		2010 25,589 0 6,557	2011 145,151 1,507 31,397 58,569 30,092 40,198	2012 229,873 29,977 32,952 212,554 32,032 30,667	2013 445,779 55,903 34,491 334,679 33,432 0	2014 381,628 40,820 31,907 161,314 34,654	2015 273,695 48,430 0 50,403 35,921	2016 133,386 81,253 0 38,558	2017 12,506 76,427 0 15,355	2018 0 49,279 0 3,817	2019
YEAR OF EXPENDITURE DOLLARS (X\$000)  10 GUIDEWAY & TRACK ELEMENTS 20 STATIONS, STOPS, TERMINALS, INTERMODAL 30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS 40 SITEWORK & SPECIAL CONDITIONS 50 SYSTEMS 60 ROW, LAND, EXISTING IMPROVEMENTS 70 VEHICLES	YOE Dollars 1,647,608 383,595 137,304 885,186 311,031 117,630 345,624		2010 25,589 0 6,557 9,938 0 46,766	2011 145,151 1,507 31,397 58,569 30,092 40,198 13,679	2012 229,873 29,977 32,952 212,554 32,032 30,667 4,698	2013 445,779 55,903 34,491 334,679 33,432 0 29,039	2014 381,628 40,820 31,907 161,314 34,654 0 149,367	2015 273,695 48,430 0 50,403 35,921 0 148,841	2016 133,386 81,253 0 38,558 37,337 0	2017 12,506 76,427 0 15,355 38,597 0	2018 0 49,279 0 3,817 40,131 0	2019 0 0 0 0 28,835 0
YEAR OF EXPENDITURE DOLLARS (X\$000)  10 GUIDEWAY & TRACK ELEMENTS  20 STATIONS, STOPS, TERMINALS, INTERMODAL  30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS  40 SITEWORK & SPECIAL CONDITIONS  50 SYSTEMS  60 ROW, LAND, EXISTING IMPROVEMENTS  70 VEHICLES  80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	YOE Dollars 1,647,608 383,595 137,304 885,186 311,031 117,630 345,624 829,833		2010 25,589 0 6,557 9,938 0 46,766 0 77,869	2011 145,151 1,507 31,397 58,569 30,092 40,198 13,679 125,917	2012 229,873 29,977 32,952 212,554 32,032 30,667 4,698 99,243	2013 445,779 55,903 34,491 334,679 33,432 0 29,039 109,422	2014 381,628 40,820 31,907 161,314 34,654 0 149,367 94,878	2015 273,695 48,430 0 50,403 35,921 0 148,841 78,304	2016 133,386 81,253 0 38,558 37,337 0 0 71,810	2017 12,506 76,427 0 15,355 38,597 0 0 65,312	2018 0 49,279 0 3,817 40,131 0 0 64,578	2019 0 0 0 0 28,835 0 0 42,499
YEAR OF EXPENDITURE DOLLARS (X\$000)  10 GUIDEWAY & TRACK ELEMENTS  20 STATIONS, STOPS, TERMINALS, INTERMODAL  30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS  40 SITEWORK & SPECIAL CONDITIONS  50 SYSTEMS  60 ROW, LAND, EXISTING IMPROVEMENTS  70 VEHICLES  80 PROFESSIONAL SERVICES (applies to Cats. 10-50)  90 UNALLOCATED CONTINGENCY	YOE Dollars 1,647,608 383,595 137,304 885,186 311,031 117,630 345,624 829,833 284,398		2010 25,589 0 6,557 9,938 0 46,766	2011 145,151 1,507 31,397 58,569 30,092 40,198 13,679	2012 229,873 29,977 32,952 212,554 32,032 30,667 4,698 99,243 40,813	2013 445,779 55,903 34,491 334,679 33,432 0 29,039 109,422 62,565	2014 381,628 40,820 31,907 161,314 34,654 0 149,367 94,878 53,674	2015 273,695 48,430 0 50,403 35,921 0 148,841 78,304 38,136	2016 133,386 81,253 0 38,558 37,337 0 0 71,810 22,234	2017 12,506 76,427 0 15,355 38,597 0 0 65,312 12,985	2018 0 49,279 0 3,817 40,131 0 0 64,578 9,961	2019 0 0 0 28,835 0 42,499 5,512
YEAR OF EXPENDITURE DOLLARS (X\$000)  10 GUIDEWAY & TRACK ELEMENTS  20 STATIONS, STOPS, TERMINALS, INTERMODAL  30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS  40 SITEWORK & SPECIAL CONDITIONS  50 SYSTEMS  60 ROW, LAND, EXISTING IMPROVEMENTS  70 VEHICLES  80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	YOE Dollars 1,647,608 383,595 137,304 885,186 311,031 117,630 345,624 829,833		2010 25,589 0 6,557 9,938 0 46,766 0 77,869	2011 145,151 1,507 31,397 58,569 30,092 40,198 13,679 125,917	2012 229,873 29,977 32,952 212,554 32,032 30,667 4,698 99,243	2013 445,779 55,903 34,491 334,679 33,432 0 29,039 109,422	2014 381,628 40,820 31,907 161,314 34,654 0 149,367 94,878	2015 273,695 48,430 0 50,403 35,921 0 148,841 78,304	2016 133,386 81,253 0 38,558 37,337 0 0 71,810	2017 12,506 76,427 0 15,355 38,597 0 0 65,312	2018 0 49,279 0 3,817 40,131 0 0 64,578 9,961	2019 (C) (C) (C) (28,835 (C) (42,499

# ANNUALIZED COST-BUILD ALTERNATIVE

(Rev.11, May 2, 2008)

City and County of Honolulu

Honolulu Rail Transit Project, East Kapolei to Ala Moana Center via Airport

Today's Date 5/1/09
Yr of Base Year \$ FY 2009

Application for P.E.

Yr of Revenue Ops FY 2019

Application for t.L.						110	ritevenue opo	1 1 2015
	Quantity	Total Base	Cat. 80	Spread	Revised	Years of	Annualization	Annualized
	a.a.a.	Year Dollars	Prof. Svc.	Cat. 90	Total Base	Useful Life	Factor	Cost
		(X000)	spread	Unalloc.	Year Dollars	Oseiui Liie	(based on 7%	
		(1000)	proportionally	Cont.	(X000)		rate)	(X000)
					(X000)			
			over	according to			[.07/1 - (1.07)^-	
			Cats. 10 - 50	perceived			no. yrs]	
			(X000)	risks				
				(X000)				
10 GUIDEWAY & TRACK ELEMENTS (route miles)	20.48	1,406,228	370,154	175,000	1,951,383			139,364
10.01 Guideway: At-grade exclusive right-of-way	0.00	0	0		0	125	0.0700	0
10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)	0.00	0	0		0	30	0.0806	0
			-		183	1000		
10.03 Guideway: At-grade in mixed traffic	0.00	0	0		0	20	0.0944	0
10.04 Guideway: Aerial structure	20.14	1,232,999	324,556	175,000	1,732,555	80	0.0703	121,822
10.05 Guideway: Built-up fill	0.00	0	0		0	80	0.0703	0
10.06 Guideway: Underground cut & cover	0.00	0	0		0	125	0.0700	0
10.07 Guideway: Underground tunnel	0.00	0	0		0	125	0.0700	0
10.08 Guideway: Retained cut or fill	0.34	6,912	1,819		8,732	125	0.0700	611
10.09 Track: Direct fixation		154,236	40,599		194,835	30	0.0806	15,701
10.10 Track: Embedded		0	0		0	20	0.0944	0
10.11 Track: Ballasted		0	0		0	35	0.0772	0
					131			
10.12 Track: Special (switches, turnouts)		12,081	3,180		15,261	30	0.0806	1,230
10.13 Track: Vibration and noise dampening		0	0		0	30	0.0806	0
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	21	305,779	80,489	33,000	419,267			30,525
20.01 At-grade station, stop, shelter, mall, terminal, platform	0	0	0	-,	0	70	0.0706	0
	100			22.222				
20.02 Aerial station, stop, shelter, mall, terminal, platform	21	232,949	61,318	33,000	327,267	70	0.0706	23,111
20.03 Underground station, stop, shelter, mall, terminal, platform	0	0	0		0	125	0.0700	0
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	0	0	0		0	70	0.0706	0
20.05 Joint development		0	0		0	70	0.0706	0
			190	_	- 10	V938	200.000.000.000	- 25
20.06 Automobile parking multi-story structure		0	0		0	50	0.0725	0
20.07 Elevators, escalators		72,830	19,171		92,001	30	0.0806	7,414
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		121,659	32,024	15,000	168,682			12,223
30.01 Administration Building: Office, sales, storage, revenue counting		20,841	5,486		26,327	50	0.0725	1,908
			0			50	0.0725	0
30.02 Light Maintenance Facility		0			0		17 / P (13 / P/A)	
30.03 Heavy Maintenance Facility		100,818	26,538	15,000	142,355	50	0.0725	10,315
30.04 Storage or Maintenance of Way Building		0	0		0	50	0.0725	0
30.05 Yard and Yard Track		0	0		0	80	0.0703	0
40 SITEWORK & SPECIAL CONDITIONS		757,624	199,426	18,953	976,003			75,971
The first of the f			_	10,500		100		
40.01 Demolition, Clearing, Earthwork		34,617	9,112		43,729	125	0.0700	3,062
40.02 Site Utilities, Utility Relocation		448,066	117,942		566,008	125	0.0700	39,629
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		13,694	3,605	8,953	26,252	125	0.0700	1,838
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		13,284	3,497	10,000	26,781	125	0.0700	1,875
				10,000		2000	WAS CONTROL	
40.05 Site structures including retaining walls, sound walls		0	0		0	80	0.0703	0
40.06 Pedestrian / bike access and accommodation, landscaping		0	0		0	20	0.0944	0
40.07 Automobile, bus, van accessways including roads, parking lots		247,964	65,270		313,234	20	0.0944	29,567
		0	0		0	100		0
40.08 Temporary Facilities and other indirect costs during construction						100	0.0701	
50 SYSTEMS		254,286	66,935	0	321,221			25,837
50.01 Train control and signals		43,283	11,393		54,677	30	0.0806	4,406
50.02 Traffic signals and crossing protection		30,296	7,975		38,271	30	0.0806	3,084
50.03 Traction power supply: substations		52,513	13,823		66,336	50	0.0725	4,807
		_						
50.04 Traction power distribution: catenary and third rail		85,639	22,542		108,181	30	0.0806	8,718
50.05 Communications		26,026	6,851		32,876	20	0.0944	3,103
50.06 Fare collection system and equipment		5,454	1,436		6,890	25	0.0858	591
50.07 Central Control		11,075	2,915		13,990	30	0.0806	1,127
				244.052			0.0000	
Construction Subtotal (10 - 50)		2,845,577	749,027	241,953	3,836,556			283,920
60 ROW, LAND, EXISTING IMPROVEMENTS		127,925		0	127,925			8,957
60.01 Purchase or lease of real estate		124,523			124,523	125	0.0700	8,718
60.02 Relocation of existing households and businesses		3,402			3,402	125	0.0700	238
70 VEHICLES (number)	673	782,610		0	782,610			84,837
70.01 Light Rail	0	0			0	25	0.0858	0
70.02 Heavy Rail	85	341,590			341,590	25	0.0858	29,312
70.03 Commuter Rail	0	0			0	25	0.0858	0
70.04 Bus	588	407,880			407,880	12	0.1259	51,353
70.05 Other	0	0			0	12	0.1259	0
70.06 Non-revenue vehicles	0	6,215			6,215	12	0.1259	782
70.07 Spare parts	0	26,925			26,925	12	0.1259	3,390
The property of the control of the c					20,020	12	0.1200	0,000
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)		749,027						
80.01 Preliminary Engineering		22,435						
80.02 Final Design		125,756						
80.03 Project Management for Design and Construction		125,756						
80.04 Construction Administration & Management		279,459						
80.05 Professional Liability and other Non-Construction Insurance		41,919						
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		41,919						
80.07 Surveys, Testing, Investigation, Inspection		13,973						
80.08 Start up		97,810						
		82						
Subtotal (10 - 80)		4,505,138						
90 UNALLOCATED CONTINGENCY		242,717						
Subtotal (10 - 90)		4,747,856	749,027	241,953	4,747,091			377,714
Bus Maintenance Base		25,637	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0	25,637	50	0.0725	1,858
Transit Centers		10,300		0	10,300	70	0.0706	727
TOTAL		4,783,792		241,953	4,783,028			380,299
	_			_				

## MAIN WORKSHEET-BASELINE ALTERNATIVE City and County of Honolulu

(Rev.11, May 2, 2008)

Honolulu Rail Transit Project, East Kapolei to Ala Moana Center via Airport

Today's Date Yr of Base Year \$

5/1/09 FY 2009

Application for P.E.

Yr of Revenue Ops

FY 2019

Application for P.E.						YrotR	evenue Ops	FY 2019
	Quantity	Base Year	Base Year	Base Year	Base Year	Base Year	Base Year	Baseline Alternative
		Dollars w/o	Dollars	Dollars	Dollars Unit	Dollars Percentage	Dollars Percentage	Cost Parameters (X000)
		Contingency	Allocated	TOTAL	Cost	of	of	see
		(X000)	Contingency	(X000)	(X000)	Construction Cost	Total Project Cost	New Starts Reporting
40 OURDENAY O TRACK ELEMENTO (************************************	0.00	_	(X000)				70	Instructions for additional info
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0	0		0%	0%	
10.01 Guideway: At-grade exclusive right-of-way 10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)				0				1082/route mile
10.03 Guideway: At-grade in mixed traffic				0				1082/route mile
10.04 Guideway: Aerial structure	1	1		0				1002/10ute IIIIle
	-			0				
10.05 Guideway: Built-up fill	-			0				
10.06 Guideway: Underground cut & cover 10.07 Guideway: Underground tunnel	<b>-</b>			0				
10.08 Guideway: Retained cut or fill	1			0				
10.09 Track: Direct fixation	-			0				
				0				
10.10 Track: Embedded 10.11 Track: Ballasted				0				
10.12 Track: Special (switches, turnouts)				0	(			
10.13 Track: Vibration and noise dampening				0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	2	0	0	10,300	\$ 5,150	15%	2%	
20.01 At-grade station, stop, shelter, mall, terminal, platform		0	0	0	\$ 3,130	13 /6	2 /0	216/station
20.02 Aerial station, stop, shelter, mall, terminal, platform				0				2 TO/Station
20.03 Underground station, stop, shelter, mall, terminal, platform				0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	2			10,300	\$ 5,150			
20.05 Joint development				0	\$ 0,100			
20.06 Automobile parking multi-story structure				0				
20.07 Elevators, escalators				0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		0	0	35,041		51%	6%	
30.01 Administration Building: Office, sales, storage, revenue counting		0	0	0		3176	0 70	
30.02 Light Maintenance Facility				35,041				
30.03 Heavy Maintenance Facility				0	4			
30.04 Storage or Maintenance of Way Building		-		0	T.			
30.05 Yard and Yard Track				0				
40 SITEWORK & SPECIAL CONDITIONS		0	0	22,795		33%	4%	
40.01 Demolition, Clearing, Earthwork		0	0	0		33 /6	7 70	
40.02 Site Utilities, Utility Relocation				0				
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		-		0				
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks				0				
40.05 Site structures including retaining walls, sound walls				0				
40.06 Pedestrian / bike access and accommodation, landscaping				0				
40.07 Automobile, bus, van accessways including roads, parking lots				22,795			1	5.4/on-grade space
40.08 Temporary Facilities and other indirect costs during construction				0		00/	00/	
50 SYSTEMS		0	0	0		0%	0%	
50.01 Train control and signals				0				
50.02 Traffic signals and crossing protection				0				27/intersection
50.03 Traction power supply: substations				0				
50.04 Traction power distribution: catenary and third rail				0				101
50.05 Communications				0				13/bus and 13/sign
50.06 Fare collection system and equipment				0	c l			10.8/bus
50.07 Central Control				0		10001	1001	16.2-27 /bus
Construction Subtotal (10 - 50)		0	0	68,136		100%	12%	
60 ROW, LAND, EXISTING IMPROVEMENTS		0	0	0			0%	
60.01 Purchase or lease of real estate 60.02 Relocation of existing households and businesses				0				
70 VEHICLES (number)	703	0	0	503,500	\$ 716		88%	
70.01 Light Rail			-	0	, 10		0070	
70.02 Heavy Rail				0				
70.02 Fleavy Kall 70.03 Commuter Rail				0				
70.04 Bus	703			503,500	\$ 716			433 conventional or
70.05 Other	700			0	7 110			703 articulated bus
70.06 Non-revenue vehicles				0				
70.07 Spare parts				0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)		0	0	0		0%	0%	
80.01 Preliminary Engineering			0	0		V /0	U 70	
80.02 Final Design				0				
80.03 Project Management for Design and Construction				0				
80.04 Construction Administration & Management				0				
80.05 Professional Liability and other Non-Construction Insurance				0				
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.				0				
80.06 Legal; Permits, Review Fees by other agencies, cities, etc.  80.07 Surveys, Testing, Investigation, Inspection				0				
80.08 Start up				0				
Subtotal (10 - 80)		0	0	571,636			100%	
90 UNALLOCATED CONTINGENCY		0	U	37 1,030			0%	
JU STALLOGATED CONTINGENCT				571,636			100%	
				071,030			100%	
Subtotal (10 - 90)	1							
Subtotal (10 - 90) 100 FINANCE CHARGES Total Project Cost (10 - 100)				NA 571,636			100%	

Allocated Contingency as % of Base Yr Dollars w/o Cont.

Unallocated Contingency as % of Base Yr Dollars w/o Contingency
Total Contingency as % of Base Yr Dollars w/o Contingency

Unallocated Contingency as % of Subtotal (10 - 80)

### ANNUALIZED COST-BASELINE ALTERNATIVE

(Rev.11, May 2, 2008)

City and County of Honolulu

Application for P.E.

Today's Date

5/1/09

Honolulu Rail Transit Project, East Kapolei to Ala Moana Center via Airport

Yr of Base Year \$ FY 2009

Yr of Revenue Ops FY 2019

Application for P.E.						11.0	r Revenue Ops	FT 2019
	Quantity	Total Base	Cat. 80	Spread	Revised	Years of	Annualization	Annualized
		Year Dollars	Prof. Svc.	Cat. 90	Total Base	Useful Life	Factor	Cost
		(X000)	spread	Unalloc.	Year Dollars		(based on 7%	(X000)
		, , , , , ,	proportionally	Cont.	(X000)		rate)	(1000)
			over	according to			[.07/1 - (1.07)^-	
			Cats. 10 - 50	perceived			no. yrs]	
			(X000)	risks				
			(-1)	(X000)				
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0	0	0			0
10.01 Guideway: At-grade exclusive right-of-way	0.00	0	0	0	0	125	0.0700	0
	F13000771					6.17.0		
10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)	0.00	0	0		0	30	0.0806	0
10.03 Guideway: At-grade in mixed traffic	0.00	0	0		0	20	0.0944	0
10.04 Guideway: Aerial structure	0.00	0	0		0	80	0.0703	0
10.05 Guideway: Built-up fill	0.00	0	0		0	80	0.0703	0
10.06 Guideway: Underground cut & cover	0.00	0	0		0	125	0.0700	0
10.07 Guideway: Underground tunnel	0.00	0	0		0	125	0.0700	0
10.08 Guideway: Retained cut or fill	0.00	0	0		0	125	0.0700	0
	0.00	0				2175.000		
10.09 Track: Direct fixation			0		0	30	0.0806	0
10.10 Track: Embedded		0	0		0	20	0.0944	0
10.11 Track: Ballasted		0	0		0	35	0.0772	0
10.12 Track: Special (switches, turnouts)		0	0		0	30	0.0806	0
10.13 Track: Vibration and noise dampening		0	0		0	30	0.0806	0
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	2	10,300	0	0	10,300			727
20.01 At-grade station, stop, shelter, mall, terminal, platform	0	0	0		0	70	0.0706	0
	0	0	0		0	70	0.0706	0
20.02 Aerial station, stop, shelter, mall, terminal, platform								
20.03 Underground station, stop, shelter, mall, terminal, platform	0	0	0		0	125	0.0700	0
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	2	10,300	0		10,300	70	0.0706	727
20.05 Joint development		0	0		0	70	0.0706	0
20.06 Automobile parking multi-story structure		0	0		0	50	0.0725	0
20.07 Elevators, escalators		0	0		0	30	0.0806	0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		35,041	0	0	35,041		0.0000	2,539
				0		50	0.0705	
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0	50	0.0725	0
30.02 Light Maintenance Facility		35,041	0		35,041	50	0.0725	2,539
30.03 Heavy Maintenance Facility		0	0		0	50	0.0725	0
30.04 Storage or Maintenance of Way Building		0	0		0	50	0.0725	0
30.05 Yard and Yard Track		0	0		0	80	0.0703	0
40 SITEWORK & SPECIAL CONDITIONS		22,131	0	0	22,131			2,089
40.01 Demolition, Clearing, Earthwork		0	0		0	125	0.0700	0
						125	0.0700	1/4
40.02 Site Utilities, Utility Relocation		0	0		0		THE RESIDENCE OF THE PARTY OF T	0
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		0	0		0	125	0.0700	0
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks	2	0	0		0	125	0.0700	0
40.05 Site structures including retaining walls, sound walls		0	0		0	80	0.0703	0
40.06 Pedestrian / bike access and accommodation, landscaping		0	0		0	20	0.0944	0
40.07 Automobile, bus, van accessways including roads, parking lots		22,131	0		22,131	20	0.0944	2,089
40.08 Temporary Facilities and other indirect costs during construction		0	0		0	100	0.0701	0
50 SYSTEMS		0	0	0	0	-	1010000	0
50.01 Train control and signals		0	0		0	30	0.0806	0
50.02 Traffic signals and crossing protection		0	0		0	30	0.0806	0
50.03 Traction power supply: substations		0	0		0	50	0.0725	0
50.04 Traction power distribution: catenary and third rail		0	0		0	30	0.0806	0
50.05 Communications		0	0		0	20	0.0944	0
50.06 Fare collection system and equipment		0	0		0	25	0.0858	0
50.07 Central Control		0	0		0	30	0.0806	0
						30	0.0000	
Construction Subtotal (10 - 50)		67,472	0	0	67,472			5,355
60 ROW, LAND, EXISTING IMPROVEMENTS		0		0	0	15-	0.0===	0
60.01 Purchase or lease of real estate		0			0	125	0.0700	0
60.02 Relocation of existing households and businesses	700	0			0	125	0.0700	0
70 VEHICLES (number)	703	503,500		0	503,500			63,392
70.01 Light Rail	0	0			0	25	0.0858	0
70.02 Heavy Rail	0	0			0	25	0.0858	0
70.03 Commuter Rail	0	0			0	25	0.0858	0
70.04 Bus	703	503,500			503,500	12	0.1259	63,392
70.05 Other	0	0			0	12	0.1259	0
	0	0						752
70.06 Non-revenue vehicles					0	12	0.1259	0
70.07 Spare parts	0	0			0	12	0.1259	0
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)		0						
80.01 Preliminary Engineering		0						
80.02 Final Design		0						
80.03 Project Management for Design and Construction		0						
80.04 Construction Administration & Management		0						
80.05 Professional Liability and other Non-Construction Insurance	1	0						
80.06 Legal, Permits; Review Fees by other agencies, cities, etc.		0						
80.07 Surveys, Testing, Investigation, Inspection		0						
80.08 Start up		0						
Subtotal (10 - 80)		570,972						
90 UNALLOCATED CONTINGENCY		0						
Subtotal (10 - 90)		570,972	0	0	570,972			68,747
, ,								